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ABSTRACT

Drawn from a recent American Association for the Advancement of Science publication, "An Inventory of Programs in Science for Minority Students: 1960-1975", this directory of science programs and projects for American Indians includes the following: 23 programs specifically designed for Native Americans; 36 programs that specifically include Indians with other minorities; and 84 programs that are intended to apply to all minority groups. Each project or program entered in this inventory is recorded in a standard form which includes: an entry number; location; educational level (elementary, secondary, collegiate, graduate, professional, and post-secondary/non-collegiate); amount of funding; source of funds; number of participants; program title and discipline; minority group involved/targeted (Black, Chicano/Mexican American, Native American/American Indian, Mainland Puerto Rican); program dates; annotation (the amount of information varies); contact person, including address and phone number. (JC)

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INVENTORY
OF
PROJECTS AND PROGRAMS IN SCIENCE
FOR
AMERICAN INDIANS

U S DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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Office of Opportunities in Science

American Association for the Advancement of Science
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December 1976

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AAAS OFFICE OF OPPORTUNITIES IN SCIENCE

THE MAJOR PURPOSES OF THE OOS ARE:

* to increase the number of minorities, women and the handicapped in the natural, social and applied sciences;

* to increase the kinds of opportunities available to these groups;

* to increase the participation of minority, women and handicapped scientists and engineers in policy-making, advisory and managerial positions.

TO FULFILL THESE PURPOSES, the OOS is involved in many programs and activities. It functions as a *clearinghouse* on information concerning women, minorities and the handicapped; it acts as *liason with other professional organizations* to help coordinate equal opportunity efforts; it works with the *Scientific Manpower Commission* on problems dealing with the recruitment, education and utilization of women, minority and handicapped scientists; and *within the AAAS* it encourages the increased participation of these groups and the consideration of issues concerning them in all programs and activities of the Association.

UNDER THE GUIDANCE OF ITS ADVISORY COMMITTEE AND PANELS, the Office has developed numerous programs to implement its objectives. *Programs in Science for Minority Students, 1960-75* is an inventory of projects undertaken since 1960 which have been aimed at improving the quality of science education for minority students. *"A Conference of Minorities in Science,"* held as part of the AAAS Annual Meeting in Boston, February 19-21, 1976, assessed this country's efforts to bring about an adequate representation of minorities in the sciences. Proceedings, *Minorities in Science,* will be published. The *Project on Native Americans in Science* is investigating the problems and developing strategies for improving the science education and opportunities available to Native Americans. It is also developing programs on ethnoscience and ethnomedicine, and on altering the attitudes of the general public and educators that are detrimental to Native American progress in technical fields. The *Project on the Handicapped in Science* seeks to improve the status and participation of handicapped scientists and to improve science education available to handicapped youth. One activity is to make professional meetings completely accessible to the physically disabled, as it recently did with the AAAS Annual Meeting. *Rosters of Minority and Women Professionals,* published in 1975, is an assessment of the uses and benefits of rosters as tools to achieve equal opportunity.

The OOS welcomes ideas, suggestions and help from all who are interested.

* * * *

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The following Inventory of Projects and Programs in Science for Ameri an Indians is drawn from the recent AAAS publication, An Inventory of Programs in Science for Minority Students, 1960-1975 which was compiled by Shirley Mahaley Malcom, John Cownie, and Janet Welsh Brown of the Office of Opportunities Staff. The Project on Native Americans in Science, which is part of the Office of Opportunities in Science decided that a separate listing of the Indian-directed projects selected from the larger inventory would be useful to those individuals and institutions working to improve science education and opportunities for Indian people.

This document has many uses. Some of these were envisioned by those who conceived of the idea of the Inventory, others by Inventory staff. Still others, we hope, will spring from the user. We expect that this document will serve as a source of information and ideas for new programs for Native peoples and that program designers and implementers can and will build on the experiences of others. It is hoped that experienced individuals will be contacted in the planning stage of new programs so that their ideas and suggestions can be taken into consideration prior to final commitment to a particular program form. This document can serve as ideabook, human resource directory, guide to program needs and to possible funding sources. It should be expected that programs will probably not be perfectly transferable and that modifications and local adaptations to tribal, regional, and urban center uses may be called for.

The number of Indians actually impacted on is not specified in the descriptions of most programs, and it is clear that where many programs are theoretically open to all minorities, Indian people may not have participated. However, it is hoped that the information about the existence of such programs will prompt the increased application and entrance of Indian students into the programs, and as well, will inspire the examination of needs in terms of program development. Readers will note that there are few programs directed specifically toward Native peoples; that most of the ones so directed are at the collegiate level; and that most programs cover the biological and biomedical/health sciences. Thus serious needs exist on the precollegiate levels and specific needs in the physical sciences, natural resources, and mathematics can be defined from consideration of available programs. For additional findings on programs for other minorities, you may want to consult the introduction to the larger inventory.

This Inventory would be much more useful to you, the reader, if the evaluation phase of the Inventory Project had been funded. That would have permitted some judgments as to the relative value of particular kinds of projects, their relative impact and some clear "should and should not" guidelines to project planning, implementation and evaluation. Those experiences in science programming for Indians will probably be able to glean some of this information from the material presented in the Inventory. Some form of evaluation is still needed, however, to put the total picture into perspective and to delineate clearly the factors leading to the success or failure of efforts.

How to Use this Inventory

Each project or program entered in this inventory is recorded in a standard form. The amount of information available to the compilers on each project varied sharply; they have included all of the important information available in each case. The form of each entry is as follows:

Number of Entry Title of Program (Discipline)
Location
Educational Level / Minority Group Involved/Targeted / Program dates
(specific grade or level)
Amount of funding / Source of Funds / Number of Participants
Annotation
Contact person, address, telephone number

Code

Educational Level:

Elem	-	Elementary
Sec	-	Secondary
Coll	-	Collegiate
Grad	-	Graduate
Prof	-	Professional
Post-Sec	-	Post-secondary, non-collegiate

Minority Group Involved/Targeted:

B	-	Black
C	-	Chicano/Mexican-American
N	-	Native American/American Indian
P	-	Mainland Puerto Rican

This Inventory is organized into three categories: 1. twenty-three programs specifically designed for Native Americans (starting with entry #1); 2. thirty-six programs that specifically include Indians with other minorities (starting with entry #24); 3. and eighty-four programs that are intended to apply to all minority groups (starting with entry #60). To save space we have omitted the descriptive narrative when programs specified "All" as the target group, and we encourage users to seek specific information from any of the programs listed.

1 Cedar Programs (Science)
The Science Museum of Minnesota, St. Paul, Minnesota
Elem / N /
/ Self-sustaining /

The purpose of this program is to teach Indian and non-Indian children about the Dakota, Ojibwa, Hopi and Navajo cultures, and to point out the relationship between environment and culture. The program, taught by a Native American teacher, provides hands-on experience for students. An outreach program makes these experiences available to children all over the state, particularly on Indian reservations.
Ms. Karla McGray, Administrative Assistant, Education Department, The Science Museum of Minnesota, St. Paul, MN 55101

2 Hopi Health Professions Development Program (Health Sciences)
Hopi Reservation, Arizona
Elem, Sec, Coll / N / 1973-
/ /

The goal of this program is to encourage high ability Hopi youth to enter the health profession so that they may improve health services to Hopi people on the reservation. Elementary students are exposed to the program as part of their regular classroom career education experience. High school students are selected on the basis of their academic achievement, their potential for doing college work, their interest in health professions and demonstrated social stability. At the elementary level Hopi students are exposed to a wide range of careers through career education in the local schools. Students learn about these careers by listening to workers in their classrooms, visiting areas where people work, both on and off the reservation and with "hands on" activities. High school students selected for the program receive academic counseling, tutoring and guidance. During the summer they participate in a preceptorship program where they work alongside medical professionals, gaining invaluable work exposure experience. High school seniors receive special assistance in gaining admittance to college professional health programs. College students selected for the program receive counseling in such areas as selection of schools, financial aid application and academic course selection. They also participate in summer work programs in health areas. They are encouraged and given assistance to complete the training necessary to achieve their career goals.
Hopi Health Professions Development Program, P.O. Box 123, Oraibi, AZ 86039

3 Summer Science 1969 (Physics)
Lac Courtes Oreille Chippewa Indian Reservation, Reserve, Wisconsin
Elem (5-8) / N / August 1969
$8000 / OEO / 20

The purpose of this four-week summer program was to interest and educate rural Indian boys in elementary electricity and electronics--developing an interest which could one day carry the participants to careers in electronics technology or engineering. The boys were given classroom instruction centering around a series of electrical and magnetic gadgets (motors, buzzers, telephones, etc.) any devices from which they could learn about electricity. [Note: Dr. McVoy carried out a similar program in 1968 at Santa Clara Indian Reservation (N.M.) in collaboration with Dr. R. Burman of Los Alamos.]
Dr. K. W. McVoy, Department of Physics, 2531 Sterling Hall, 1150 University Avenue, Madison, WI 53706

4 First Americans - Tomorrow's Engineers (FATE) (Engineering)
University of Oklahoma, Norman, Oklahoma
Sec (10, 11) / N / Summer 1974-

Participants for this summer program were obtained by mass mailing of the FATE III brochure to state high school counselors and math and science teachers. Program representatives talked to students at various career day activities. The goal of this program is to interest capable Indian students in the engineering profession through student involvement in activities designed to provide a view of an engineer's educational preparation, the university experience, and the various jobs performed by engineers. The program involves in-class lectures, lab and field work that allows students to operate experimental apparatus in the collection and analysis of data. The students live in college dormitories with university students, eat in the dorm cafeteria and attend a number of university-sponsored social events. The students hear presentations by practicing Indian engineers. The engineers explain their professional duties, why they chose engineering, and their academic preparation. A survey taken of the 21 seniors (current) that participated in FATE II (Summer 1975) shows that six plan on an engineering major. Two intend to study medicine, and one intends to major in forestry. Almost half plan on a major in a technical area. The remainder of the seniors did not respond to the survey or are still undecided.
George Thomas, University of Oklahoma, College of Engineering, 202 W. Boyd, Room 107, Norman, OK 73069 (405) 325-3192

5 Museum Job Opportunities for Native American Students (Science)
Science Museum of Minnesota, St. Paul, Minnesota
Post-Sec / N /
/ Federal /

The goals of this program were to provide young Indian people with an opportunity to explore career alternatives and be exposed to the museum environment.
Ms. Karla McGray, Administrative Assistant, Education Department, Science Museum of Minnesota, St. Paul, MN 55101

6 Lummi Indian School of Aquaculture (Aquaculture)
Lummi Island, Washington
Coll (13,14) / N / 1973-
$1,350,000 / / 150

The purpose of the program is to increase job potential of Native Americans through increase in basic and vocational training in aquaculture-related sciences. By means of basic education in biology, marine biology, ichthyology, microbiology, histology, limnology, and other fields, coupled with on-the-job training at fish hatcheries and fish farms the training goal was achieved. Seventy percent of the 150 participants were employed in the field upon completion of their training.
Dr. Paul Winkler, P. O. Box 11, Lummi Island, WA 98262 (206) 758-2368

7 Sheldon Jackson College Aquaculture Program (Aquaculture, Biology, Fisheries)
Sheldon Jackson College Campus, Sitka, Alaska
Coll (13, 14) / N / 1975-
$138,000 / Northwest Area Foundation / 15

This program includes a student training facility for salmon ranching which also serves as demonstration model for an economic feasibility study of salmon aquaculture. The objectives are: to promote Native Alaskan education; that is, to provide an educational career ladder for Indians, Aleuts, and Eskimos so that what they learn can be transferred to a meaningful and rewarding life experience; to improve salmon fishing, that is, to establish a private salmon hatchery to produce fish for the common property fisheries and to demonstrate the feasibility of salmon ranching as a source of self-sustaining funds for the program; to promote cooperation between public and private organizations involved in the orderly development of salmon ranching; and to provide technical advice and assistance to various Native and non-Native entrepreneurs who will be closely following the results of this program. Job placement is provided.
Mel Siefert, Director, Aquaculture Program, Box 479, Sitka, AK 99835 (907) 747-5238

8 Native American Science Training (Biology)
University of Utan, Salt Lake City, Utah
Coll / N / 1971-
$50,000 / University of Utah / 6

The goal of this project was to prepare Native American students to participate in science careers. Full university scholarships, careful monitoring and tutorial help were provided these former students of reservation high schools. The program which involved six students over the past six years was deemed unsuccessful by the project officers.
Patricia J. Berger, Department of Biology, University of Utah, Salt Lake City, UT 84112 (801) 581-5950

9 Minority Biomedical Support Program (HA) (MBS) (Biomedicine)
Haskell Indian Junior College, Lawrence, Kansas
Coll (13, 14) / N / 1976-
$87,000 (Annual) / NIH (MBS) / 7

The goal of this program is to expedite entrance of American Indians into biomedical and health related fields by providing financial support and student involvement in research activities. [Note: The application for this grant was pending for over two years because of restrictions in the federal guidelines preventing primarily federally financed institutions from receiving additional funds from other federal agencies. An exception was made and funding was approved.]
Dr. Don Ahshapanek, Haskell Indian Junior College, Lawrence, KS 66044 (913) 841-2000 X 273

10 College of Engineering Program for Native Americans (Engineering)
University of Utah, Salt Lake City, Utah
Coll / N / 1972-
$90,000 / University of Utah / 24

The goal of this project is to encourage Native Americans to enter the engineering profession. The program offers individual tutoring and counseling and special orientation courses for Native Americans to its six participants per year. Program officers report that they were not entirely successful due to the poor academic preparation and problems of motivation of the students.
Dr. W. L. Hufford, College of Engineering, University of Utah, Salt Lake City, UT (801) 581-6880

11 A Pilot Program for the Improvement of Higher Technical Education of the American Indian (And Other Technologically Disadvantaged Groups)(Engineering)
Northern Arizona University, Flagstaff, Arizona
Coll / N / 1972-1973
$27,000 / William H. Donner Foundation / 4

The purpose of this program was to increase the number of Native American youth in higher technical studies. The four participants in this pilot program were involved in conferences, interviews and discussions with leading authorities on the education of Native Americans. Critical evaluation of pertinent literature was made. Funding was available for development but not implementation of the program.
Dr. Sandor Popovics, Northern Arizona University, Box 15600, Flagstaff, AZ 86001 (602) 523-5304

12 Native American Program, College of Engineering (NAPCOE) (Engineering)
University of New Mexico, Albuquerque and Los Alamos, New Mexico
Coll / N / 1975-
$200,000 / Sloan Foundation, University of New Mexico / 42

Forty-two college students were selected from among 109 applicants. Stated goals of the program are to facilitate Native Americans graduating as engineers. The program itself focuses upon spending three years to complete through the sophomore year in engineering. It is believed that upon completing the sophomore year, the students will be better able to complete their junior and senior years. The methodology includes orientation, counseling, tutoring, group building, orientation with respect to Indian and other engineering problems, minimizing competition and encouraging group participation in projects. All program activities--planning, counseling, etc.--involve input from Native Americans. Native American tribes helped develop the program and continue to lend support.
Dr. F. C. Wessling, Academic Administrator, NAPCOE, Farris Engineering Center, Room 320, College of Engineering, University of New Mexico, Albuquerque, NM 87131 (505) 277-5521

13 Association of American Indian Physicians Recruitment Program (Health)
AAIP--Oklahoma City, Oklahoma
Coll, Grad, Prof / N /

The goals of this program are to assist and recruit American Indian students into the health careers, the objective being to increase the number of Indian students in medicine, dentistry, optometry, podiatry, pharmacy, veterinary medicine and public health professions. AAIP will help American Indians identifying health careers opportunities and pathways leading to a career in health. Students having the desire and potential will be identified. AAIP will assist them in seeking financial assistance, providing information on special programs for Indian students and will provide financial help on a limited basis for travel to admission interviews when needed. Once the

student is admitted to professional school, AAIP will assign an American Indian health professional to serve as counselor and role model.
c/o Dr. Don Jennings, The Association of American Indian Physicians, 721 N.E. 14th St., P. O. Box 26901, Oklahoma City, OK 73105

14 Headlands Indian Health Career Program (Health Sciences)
Mackinaw City, Michigan
Coll (13) / N / Ongoing
/ McCormick Foundation, U.S. Planning Office of Health Resources Opportunity / 20 per year

Applicants must be at least one-quarter Native American, enrolled in the first year of college, interested in a health career and have expressed and demonstrated a need and potential in a health career. Students should have recommendations from tribes, local area Indian health programs and college advisors. They must submit an essay on why they wish to participate, along with academic records. The goals of this 8-week summer program are: (1) to provide an intensive academic summer program revolving around science, mathematics, medical technology, and social sciences and communication skills; (2) to provide theoretical and practical experience for Native Americans who anticipate a career in the health professions; (3) to stimulate and motivate Native American college students toward the health career professions; and (4) to develop and improve study habits and skills in an atmosphere conducive to effective learning. The students learn about the variety of health careers; observe medical careers; observe medical and hospital procedure; take part in special field experiences; and receive instruction in the basic sciences. Tutors and counselors available to the students. There are also special discussions and lectures on Indian culture, history cross-culture, healing arts, etc. All costs for the students are paid.
American Indian Institute, 106 Constitution Avenue, University of Oklahoma, Norman, OK 73069

15 Indian Careers in Health/Native American Careers in Health (Health Sciences)
University of Montana, Missoula, Montana
Coll / N / 1973-
$249,000 / Public Health Service / 40

The participants for this program were obtained largely through heavy high school recruitment for the first two years of the program; current recruitment is based on fewer high school visits with more activities at the university campus. The goals of this program are to recruit Native American students to health careers and to provide student services to encourage the retention of these students at the college level. Both staff and students

are recruited at high schools located on seven Montana Indian reservations. A two-day conference is held once a year at the University of Montana to expose high school students to the university atmosphere and to give them an idea of the various health careers. Retention services include: a full-time counselor for financial aid; academic and personal counseling; tutoring for all course work for which students desire tutoring; information for use by students on health career opportunities and professional school opportunities; and a summer institute for high school graduates and third quarter freshmen for intensive skills development in sciences.
Ray Carlisle, Director, Indian Careers in Health; Barbara Olson, Director, Native American Careers in Health; University of Montana, 626 Eddy Avenue, Missoula, MT 59801

16 Native American Career Education in Natural Resources (Natural Resources)
Humboldt State University, Arcata, California
Coll / N / 1974-
$150,000 / HEW (Fund for the Improvement of Post Secondary Education)/ 33

The goal of this college level program is to increase Native American participation at professional levels in natural resource careers. Recruitment and retention efforts were made through guidance counseling, tutorial assistance and provision of financial aid. The project is not complete, but indications are that its impact will be significant.
C. J. Bryan, Director NACENR Program, Humboldt State University, Arcata, CA 95521 (707) 826-4994

17 University of South Dakota Satellite Nursing Program (Nursing)
Oglala Sioux Community College, Pine Ridge, South Dakota
Coll (13, 14) / N / 1974-
$100,000 / NIH, Indian Health Service / 20

The participants in this program were obtained by individual application. The stated goals of this program are to provide Indian nurses and nurses for reservations who will and can successfully assist others to attain and maintain a higher optimal health status and take pride in their Lakota heritage. Students are required to take the nursing and science courses along with on-the-floor clinical experience in the P.H.S. hospital located in Pine Ridge. Out of the original first two classes, four students dropped out for personal reasons; one wishes to re-enter; two transferred and one will return; three will graduate June 25, 1976 and take State Board Examinations and one will take her State Boards in February. The staff indicated that lack of science instructors is the most pressing problem and expressed the need for full staffing of the program. There are presently only two nursing instructors and no science instructors, which means that students must at times travel over 100 miles or more to take science courses.
Ms. Catherine Jenkins, Acting Director, Box 861, Pine Ridge, SD 57770 (605) 867-5856

18 Bacone College Minority Science Improvement Program (Biology, Chemistry, Physical Science, Mathematics)
Bacone College, Muskogee, Oklahoma
Coll / N / 1974-
$131,000 / NSF / 500

The program was developed to improve science instruction at Bacone, a college serving a predominantly minority student population, mostly Native Americans. Courses were individualized and modern scientific equipment was acquired. Program officers feel that this program has been quite successful in improving science instruction.
Patrick L. Gore, Box 28, Bacone College, Muskogee, OK 64401 (918) 683-4581 X 259

19 Natural Sciences (Biology, Chemistry, Physical Science, Mathematics)
Navajo Community College, Tsaile, Arizona
Coll / N / 1969-
$130,000 / Navajo CC, Navajo Health Authority / 200

This program for 30-40 regular students per year is designed to strengthen the scientific and mathematical background of students so that they can go on into programs in nursing, allied health and the "hard" sciences. The program consists of careful selection of textbook material chosen to match the reading levels of the students' tutorial sessions to help enhance the material learned in class and the addition of cultural material to the curriculum so as to relate it better to life on the reservation. More students are entering the sciences and health fields. Their scientific acuity is increasing. A few have gone on to four-year institutions and are succeeding relatively well, although from the point of view of staff, a few still have their problems despite excellent promise.
Dr. Raymond J. Barreras, Navajo Community College, Tsaile, AZ 86556 (602) 724-3311 X 266

20 Sheldon Jackson College Teacher Aide/Teacher Education Program (Science Education)
Fifteen communities throughout Southeast Alaska
Coll / N / 1971-
$641,000 / Various / 415

The objective of the program is to provide higher education and training for teacher aides in elementary schools throughout Southeast Alaska; to provide an Associate Degree in Education to continuing students; and, as a long-range goal, to improve the educational potentials for Native children in Southeast Alaskan schools. Most of the students are teacher aides working in the school systems. College courses in the area of education as

well as other training have been delivered through personalized visits by college instructors to the remote island communities in SE Alaska. These courses were synchronized to respond specifically to the needs of the students, most of whom work as TA's, education teachers, or bilingual teachers. College credit has been given for the on-the-job work experience which students receive in the classroom working with elementary-age children. The project accomplished the desired goals of providing associate-level education and training for teacher aides very specifically geared toward elementary education, which will be useful to them in their work. Secondly, the project has been expanded to the longer-range goal of providing access to a field-based Bachelor degree in elementary education to highly-motivated students. Thus, the long-range goal of improving the educational environment of children is being met, not only by TA's who are trained and educated to more competently perform their work, but also by local Native teachers who are put into the school systems as certified teachers. Utilizing locally-trained teachers accomplishes two goals: 1) it lessens the massive turn-over of teachers from outside (the lower 48) who are unequipped to cope with village life or the cultural heritage and educational needs of the children; 2) the local Native teachers give the children a model to emulate and the kind of understanding and pride in their own heritage which they need to compete in the educational arena. The Teacher Aide Program has been responding to the need to provide community-based training and education for TA's and other interested individuals in the area of education throughout Southeast Alaska. As all transportation between communities must be made by boat or plane, costs are high, and it is difficult to adequately service clientele. The use of a personalized delivery system where instructors fly out to the students has provided the type of college education that was denied to them by the fact that most of the students are parents and long-term members of the community who hold jobs and would be unable to come to a campus to obtain higher education. Greater communication would be a number one goal. Program continuity could be insured by more advanced program planning, which has been difficult to achieve due to drastic fluctuations in funding sources as federal programs come and go. Programs are being changed to a more locally-based funding situation to insure greater stability and continuity of staff and services to students. In program expansion to the baccalaureate level, there are major expansions to be accomplished in the areas of science and math, and an attempt is being made to better integrate these important subject matter areas into the total curriculum. Staff of this program would appreciate input.
Marlene A. Lund, Director, Teacher Education Program, SJC, Box 479, Sitka, AK 99835 (907) 747-5263/3407

21 Psychology Graduate Training for American Indians (Psychology)
Oklahoma State University, Stillwater, Oklahoma
Grad / N / 1976-
/ NIMH /

Students who are members of recognized tribes and who want to work professionally with American Indians are invited to apply to this program. The

goal of this program is to increase the number of American Indian professionals in psychology. The Department of Psychology has added new coursework and faculty oriented to American Indian mental health concerns. The new faculty will relate professional psychology practices to contemporary needs and interests of the American Indian community. Financial aid and counseling and support services are available to students in the program. The Psychology Department and the Native American Student Association co-sponsored a special series of seminars on Navajo medicine and mental health to initiate the department's new program.
Coordinator, Psychology Graduate Training for American Indians, North Murray Hall, Room 411, Oklahoma State University, Stillwater, OK 74074

22 MPH (Master of Public Health) Degree Program for Native Americans (Public Health)
School of Public Health, University of California, Berkeley, California
Grad / N / 1971-
/ OEO / 68 graduated or now enrolled

Applicants must be American Indian or Alaska Native, must possess a bachelor's degree, must be accepted by a School of Public Health and must pass criteria set up by the selection committee of the Indian Advisory Board to the program. The goals of this program are to stimulate the acquisition of the MPH by Native Americans so that they will be credentialed to assume program head and policy making positions at federal, state and local levels. The Berkeley program also offers support to qualifying Native American students at other Schools of Public Health, including the University of Texas; University of Minnesota; University of Washington; University of California, Los Angeles; Loma Linda University; University of North Carolina; and University of Michigan. The program provides traineeships and tuition for Indian students in the graduate school of public health. There are recruiting and support mechanisms for the students as well. Thirty-nine students have graduated from MPH programs. Three of these have gone on to medical school and one to further graduate study. A majority of those employed hold positions with tribes, Indian Health Service or in other programs directly concerned with Indian needs.

23 Dartmouth Medical School Special Program for Native Americans (Medicine)
Dartmouth Medical School, Hanover, New Hampshire
Prof / N / 1969-
$30-70,000 (annual) / HEW / 13

The goal of this program is to strengthen the background of American Indian candidates for the M.D. degree. One year's work is done in two in order to bring them up to the level of their colleagues. The structured program (1 year in 2) has been changed to provide more individualized programs in response to student needs to avoid labelling. Special assistance was given in the form of tutoring, counseling, and stipends. Some of the 13 American Indian participants have graduated with M.D.'s.
Francis Hall, Admissions, Dartmouth Medical School, Hanover, NH 03766
(603) 646-2638

24 Oregon Museum of Science and Industry/Housing Authority of Portland Activities (General Science)
Oregon Museum of Science and Industry, Portland, Oregon
Elem (1-8) / B, N / 1971-1976
$14,000 / OMSI, HAP / 875

Dean B. Ivey, OMSI, 4015 S. W. Canyon Rd., Portland, OR (503) 248-5945

25 Idaho Falls, Idaho International Science Experience Center (Science)
Elem, Sec / B, C, N / 1976
/ /

The Science Center was dedicated July, 1976. The Education program is being planned now. So far staff is only considering bilingual tours and demonstrations, and some sort of cooperation with the Migrant Education Program. They have requested help in devising more meaningful programs for minorities.
Ruth B. Kunze, Director of Education, Intermountain Science Center, Box 1802, Idaho Falls, ID 83401

26 Elementary Institute of Science (General Science)
608 51st Street, San Diego, California
Elem, Sec / B, C, N / 1964-
$300,000 / Various / 3,000

The Institute is a "little league" of science providing recreation and familiarity with science careers. Its goal is to be a socialization process preparing youth for a scientific-industrial-technical society. Another goal is to be a developer of social movers--community leaders who show their peers the advantages of scientific involvement. It aims at providing group activity therapy to youths who are alienated from their homes, schools, and/or community. The transaction between lay therapist adults who are scientists and young people in a mutually exploring setting also has the goal of preventive mental health. Finally, the program has a goal of improved intergroup relations by providing a contact process between successful adults and youths living in poverty or on the edge of poverty in a closely supervised setting. The Institute is a laboratory science club. It provides sophisticated equipment to children along with instruction in the equipment's proper use. With the equipment and instruction, youths proceed to explore their environment, answering questions that are relevant to them. Both the youth and the scientist explore together, building mutual bonds of friendship and trust. The scientist becomes a role model and the child becomes the interested listener necessary for continued adult growth. Labs are set aside for the different disciplines in various parts of what was originally an abandoned two-bedroom split level house. For instance, the kitchen is the chemistry lab, a bedroom is set aside for electronics, and the breakfast nook

houses the biology lab. The groups run from four to eight youths for each scientist in each lab. The equipment includes oscilloscopes, monocular and binocular microscopes (medical grade), 35 mm single lens cameras, and colorimeter. The program is meeting its goals. Approximately one-third of the participants are in college or have graduated from college. Only two members are known to have been convicted of a crime following participation in the program. Every referring agency or individual has been able to see growth in youths participating in the program. All evaluations and the single scholarly study show clearcut evidence of success. Almost 3,000 young people have participated, averaging 275 per year.
Mrs. Elizabeth Thompson, Executive Director, Elementary Institute of Science, 608 51st Street, San Diego, CA 92114 (714) 263-2302

27 Peer Teaching Program (Biology, Chemistry, Physical Science, Mathematics)
Minneapolis and St. Paul, Minnesota
Sec (7-12) / B, C, N / 1971-
$200,000 / Various / 242

This program trains secondary school students to teach in regular math and science classes (usually one or two grade levels below their own) in certain inner-city schools in Minneapolis and St. Paul. In this way students are used as role models for other students to influence them toward math and science. This also has the effect of increasing the amount of individualized attention which students receive in regular math and science classes. A major objective of the program is to improve attitudes toward math and science among inner-city youth as a first step towards a longer range goal of increasing minority enrollment in the Institute of Technology of the University of Minnesota.
Dr. Jack Moran, 126 Aero, University of Minnesota, Minneapolis, MN 55455 (612) 373-2165

28 Sandia/T-VI Drafting Program (Electromechanical and Construction Drafting)
Sandia Laboratories, Albuquerque, and Albuquerque Technical-Vocational Institute, Albuquerque, New Mexico
Post-Sec / B, C, N / 1974-
$41,000 / Various / 44

This 45-week program for post-secondary, financially disadvantaged, unemployed or underemployed persons provides training for drafting positions. The first trimester is classroom instruction exclusively, the second, a combination of on-the-job training and classwork and the final 15 weeks, on-the-job training full-time. Participants receive stipends.
Wayne H. Trump, Org. 4231, Sandia Laboratories, Albuquerque, NM 87115 (505) 264-6455

29 The University of Iowa Contribution to the CIC + Midwest Program for Minorities in Engineering (Engineering)
University of Iowa, Iowa City, Iowa
Sec / B, N / 1975-
$12,199 / CIC+ MPME, University of Iowa / 75

The target groups were students, teachers, counselors, school administrators and associated community leaders at three high schools in Cedar Rapids and in a school in Sioux City with heavy Indian enrollment. The project focuses on the problem of reaching minority high school students in the small city environment. Initial contact is made with school administrators, and through them with teachers, counselors, and community leaders. The university conducts a series of meetings with these individuals at schools and on campus. Teachers hold regular programs for students and mail them special materials. Four minority engineering students are a part of the school visitation team. Minority students are invited to attend regular engineering college functions, to participate in the annual honors workshops, and to attend summer preparatory courses.
Dr. Arthur F. Vetter

30 Health Professional Candidate Program (Health Science)
San Diego High School, San Diego, California
Sec (10-12) / B, C, N / 1974-
$59,000 / HEW / 60

This program's purpose was to support and encourage minority high school students in the 10th-12th grades who express motivation and demonstrate capability for education leading to and service as health professionals and para-professionals. This support was provided primarily by three types of activity: (1) classroom and out-of-classroom instruction in basic skills necessary for health careers (e.g., laboratory and medical skills, medical filing skills, nursing skills, etc.); (2) field trips and speakers related to basic skills and careers; and (3) work in hospitals, clinics, doctors offices. Stipends were provided.
Dr. Ann Bush, Project Director, Tetsuyo Kashima, Project Coordinator, 7610 Girard Avenue, La Jolla, CA 92037 (714) 459-2631

31 Career Opportunities in the Health Sciences (COHS) (Health Sciences)
University of Oklahoma Health Science Center, Oklahoma City, Oklahoma
Sec, Coll (7-13) / B, C, N / 1959-
$37,000 / Various / 25 (1976)

Students apply directly to the program. The current program is limited to applicants from Oklahoma or one of its bordering states. Students must meet minimum scholarship requirements and send letter of recommendations from

science or math teachers or counselors. The program is designed to awaken minority group students to career opportunities available to them in the health sciences, to stimulate their interest and motivation and to assist them academically toward the health career of their choice. COHS brings students to the Health Sciences Center for a summer of research work in the labs. Each participant is assigned to a faculty member. The student assists in current research going on in the advisor's lab or performs experiments especially designed for the student. In addition to lab research, participants are involved in seminars, tours, field trips, and a course on research methods. Academic counseling, special tutorials and computerized instructional aids are also available to students. The majority of students completing the program have pursued (or are intending to pursue) college training and many in the health fields or in the sciences.
Dr. Joseph J. Ferretti, Assoc. Prof., Department of Microbiology and Immunology, The University of Oklahoma Health Sciences Center, Oklahoma City, OK 73190 (405) 271-2133

32 North Carolina Health (P) Manpower Development (Health Sciences)
Pembroke State University
Sec, Coll / B, N / 1973-
$10,000 per year / Federal, State /

The goal of this program is to increase the number of minority and disadvantaged persons trained and employed in health careers. The center recruits minority and disadvantaged students into health training programs and health careers; assists minority and disadvantaged students in admission to college level and professional health training programs; identifies adequate financial resources for minority and disadvantaged students interested in pursuing professional health careers, and provides counseling and retention services for minority and disadvantaged students in health training programs. The office counsels approximately five to ten students per week and also sponsors a Health Careers Club (10 active members) which engages in volunteer activities and tries to generate interest in health careers. In addition to counseling students at PSU, staff duties also include visiting the high schools in the immediate area which have a heavy concentration of Indian pupils. Since the Fall of 1975, approximately five-hundred (500) minority high school students have been informed about the opportunities in health careers. Every summer since 1974, the NCHMDP sponsors a Clinical Work-Study Program for approximately twenty (20) minority and disadvantaged students which enables young people to gain on-the-job training in a health field, while at the same time earn money. The success of this program can best be measured by the growing awareness of these students of the many opportunities in the health care field. Last year (1975), five (5) PSU Indian students entered Medical Schools, two (2) were admitted to Dental School, three (3) went into Pharmacy. (Note: Similar programs are also ongoing at Elizabeth City State University and N.C. Central University)
Dr. Josef L. Mandel, Regional Director, NC HMDP, Human Services Center, Pembroke State University, Pembroke, NC 28372 (919) 521-4214 X 270

33 Oceanographic Summer Laboratory Program for Inner-City Youth (Marine Science)
Miami, Florida
Sec / B, N / Summers, 1969-1974
Dade County Public Schools, Neighborhood Youth Corps / 42

The purpose of this program was to provide capable inner-city students with the opportunity of work experience in government scientific labs. Students were selected mostly on teacher recommendations and interviews. Meetings were held with students, parents and scientists prior to students going into labs. Scientists who work with students were carefully selected. The program was under continuous supervision by Dade County Public Schools. Many of the student participants were motivated to remain in school and attend college.
Harriet Ehrhard, 1444 Biscayne Blvd., Room 309, Miami, FL 33132 (305) 350-3506

34 MESA (Mathematics, Engineering, Science Achievment) - Berkeley Lawrence Hall of Science and College of Engineering, University of California, Berkeley California
Sec / B, C, N / 1970-
$55,000+ / Various / 124+

The major criteria for selecting students was that they be Black, Chicano or Native American, be enrolled in college preparatory mathematics courses and express an interest in preparing for careers in the mathematics and science related fields. This program was created to encourage minority high school youth to enter math, engineering, science and related technical fields. To create a comprehensive and integrated experience for the participating students, the MESA Program is designed to include the following components: Special Counseling--Special counseling is provided for the students in selecting their high school program--course work that will meet all college entrance requirements. Counseling is also provided for the selection of college or university and for the various career opportunities. Tutorials--It was felt that many students of minority background might need additional assistance and encouragement in science and math course work in high school. Therefore, professional engineers and scientists and college students work closely with the MESA students in individualized tutorial sessions to help meet this need. Advanced MESA students assist in the tutoring of the younger students. Field Trips--In addition to the academic and skill-acquisition opportunities of the MESA Program, actual contact with engineering, science and math-related fields and individuals working in these fields is made available through field trips to research centers, universities, computer centers, engineering firms and the like. This direct contact helps to give the students an awareness of the professions they might actually be entering. The Scholarship Incentive Program--Another unique feature of the MESA Program is that of providing scholarship money to those students maintaining strong academic performance in their high school classes. This scholarship money not only provides an additional incentive but also recognizes special financial pressures on many minority

students. The scholarships are awarded on a quarterly basis. Summer Employment--To Further develop awareness of actual possibilities of future occupations and to provide employment for the MESA students, summer jobs are made available to many students. Oil refineries, medical labs, engineering firms and the like provide meaningful summer job positions for students. W. H. Somerton, Professor of Petroleum Engineering, Faculty Sponsor-MESA, University of California, Berkeley, CA 94720

35 Biological Sciences Program (Biology, Health Sciences)
State University of New York, College at Old Westbury, New York
Coll / B, N, P / 1970-
No Extral Cost / / 800

The objective of this program is to provide an undergraduate degree program in the sciences for all students regardless of prior preparation, entering ability level or previous educational level. Old Westbury maintains an open admission policy and has a predominantly minority student population, mostly Black and Puerto Rican. No student expressing an interest in the program was (is) turned away. Student preparedness in the sciences is determined by a diagnostic examination. Special courses in biology, math and chemistry skills and principles were designed to prepare students with deficient backgrounds for college level work. In addition, pure science and social science are integrated in each course at all levels of preparedness. The program has graduated only a few students thus far, and effectiveness is therefore difficult to measure. However, four students (3 minority) have gone on to professional school and one (minority) to graduate school. Dr. Joseph Rukeyser, Convener, Biological Sciences Program, SUNY at Old Westbury, Westbury, NY 11568 (516) 876-3040

36 General Biology for Educationally Disadvantaged Students (Biology)
San Diego State University, San Diego, California
Coll / B, C, N / 1972-
No Extra Cost / / 4 (staff)

This special biology course for educationally disadvantaged college students had the following objectives: (1) to encourage and motivate minority students who might opt for a career in science and to place science in a context meaningful to the minority student; (2) to overcome hampering societal pressures influencing minorities from selecting science as a career; (3) to rectify the poor educational background in the sciences typical of most minority students; and (4) to demonstrate how members of one culture can make effective use of materials from another culture. More specifically, the purpose of this course was to develop in the student who performed poorly or who had not taken high school biology, a basic background in biological concepts and an appreciation for laboratory research. A team of two teachers both members of minority groups taught the course while serving as role models to the students. Pre- and post-testing evaluative techniques were used extensively. Thise lecture/laboratory

biology course included field trips, and emphasized maximum student-teacher interaction. Learning modules were developed and used on an individual basis to rectify weak science foundations. Bilingual tutors who attended all sessions, and teaching and graduate assistants provided support services.
Dr. Vernon Avila, Zoology Department, San Diego State University, San Diego, CA 92182 (714) 286-5235 or 286-5387

37 Northeastern Oklahoma State University Minority Student Science Research Program (Biomedicine, Environmental)
Northeastern Oklahoma State University, Tahlequah, Oklahoma
Coll / B, N / 1974-
$350,000 / NIH (MBS) / 23

This program is designed to enhance the chances of success of Native American and Black American students in careers in the biomedical sciences and to alter the University and community intellectual climate by breaking down traditional psycho-social barriers inhibiting minority students from entering the biomedical sciences. Students were recruited through response to widely distributed brochures, by word of mouth of students in the program and through recommendations of the Eastern Oklahoma Indian Health Careers Program. Each student was screened on the basis of grade point and extensive interviews with all faculty involved in the program. Funding was provided for the establishment of biomedical-environmentally oriented research projects on the campus through laboratory renovation, equipment purchases, library enhancement, faculty release time, and student stipends. Minority students were asked to become junior investigators in each project. Funding was also provided for a seminar service with minority persons as speakers to serve as role models.
Dr. C. Clinton Smith, Jr., Division of Natural Science and Mathematics, Northeastern Oklahoma State University, Tahlequah, OK 74464 (918) 456-5511 X 2610

38 Biomedical Sciences Advancement Program (Biomedicine)
Basic Medical Sciences Building, University of New Mexico, Albuquerque, New Mexico
Coll, Grad / B, C, N / 1974-
$881,000 / HEW (MBS) / 79

This program in which 36-43 college students participate is designed to increase the representation of minorities in the science professions. Students are placed in labs for fifteen hours of work a week. Graduate students are supported with monthly salary and full tuition, post-doctoral fellows are provided with salary and research resources. In the view of the project officer the program would be improved if there were fewer "pre-med" students, as the design is for biomedical sciences. The involvement of minority faculty is very important in serving the "role model" function.
Dr. Sei Tokuda, Department of Microbiology, University of New Mexico, Albuquerque, NM 87131

39 Minority Student Training for Biomedical Research (Biomedicine)
California State University, Los Angeles, California
Coll, Grad / B, C, N / 1973-
$803,000 / NIH / 50 per year

This project is intended to increase the number of minority students going into biomedical careers and to improve their chances for success. Thirty-five to forty students and fifteen faculty members participate yearly. Students serve as research assistants, first as trainees and gradually with greater individual responsibility in research as they develop research techniques and practices. They participate in seminars, give papers on their research at meetings off and on campus, nationally and internationally. The success of the program is evidenced by the academic achievement, motivation and enthusiasm of the students, the rate of acceptance of participants into graduate programs, and students participation in writing scientific articles and presenting papers. Further evidence is found in the strengthening of the university's research capability, and research activity among the faculty. The fusion of the science departments which is a major impact of this project has resulted in faculty and students becoming extensively informed about basic science and research progress in fields other than their own. There is increased rapport among students and faculty. Additionally, department faculty have received several awards and grants.
Lloyd N. Ferguson, Professor of Chemistry, California State University
Los Angeles, CA 90032 (213) 224-3613

40 Southeastern Oklahoma State University Biomedical Sciences Program
(Biology, Chemistry, Biomedical Fields)
Southeastern Oklahma State University, Durant, Oklahoma
Coll / B, C, N / 1972
$440,000 / NIH (MBS) / 57

The participants for this program are obtained through recruitment at high schools and junior colleges, and by sending letters and brochures to prospective students identified through A.C.T. scores sent to S.O.S.U. The goal of this program is to increase the minority representation and opportunities for research participation in the biomedical sciences. Students in the program participate in five research projects that are a part of the program. Student participation is for 40 hours per week during a ten week summer program and 15 hours per week during the academic year. In addition, the students attend seminars, scientific meetings, and make visits to graduate/professional institutions. Student research participation involves study of scientific literature, experimentation, and presentation of their results. The project is in the process of increasing minority scientific manpower. Nine students are currently in graduate/professional schools, and others will follow in the next few years. One of the bonuses of the program is that high school level American Indian students are becoming more aware of the possibility of careers in science.
Jack L. Robinson, Ph.D., Physical Science Department, Southeastern Oklahoma State University, Durant, OK 74701

41 Equal Opportunity in Engineering (Engineering)
The University of Texas at Austin, Austin, Texas
Coll / B, C, N / 1971-Present
$40,000 / Private Industry / 400

The purpose of this program is to recruit and retain minorities in engineering. The program involves financial assistance, tutoring, advising, personal counseling, etc. Enrollments are steadily growing (105 freshmen, 1975-1976) and the retention rate is high (approximately 70%).
Dr. P. S. Schmidt, Department of Mechanical Engineering, The University of Texas at Austin, Austin, TX 78712 (512) 471-7571

42 Cooperative Education Program (Engineering, Physics, Mathematics)
Sandia Laboratories, Albuquerque, New Mexico
Coll / C, N / 1969-1976
$3,000 (1975-1976) / Sandia / 41

This program has served 41 college student participants (minorities and women) since 1970. The goal was to provide financial assistance through salaries paid during work phases of the CO-OP Program and also to provide an opportunity to integrate classroom knowledge with the work environment. Normally, students would work six months, then attend the university as full-time students, on a continuing, alternative basis. Project officer reports that the program has been successful. This program has been replaced by the Work/Study Program for the Disadvantaged.
Ms. Mary T. Quigley, Orgn. 4231, Sandia Laboratories, Albuquerque, NM 87115 (505) 264-7361

43 Engineering Student Development Project (Engineering)
College of Engineering, Michigan State University, East Lansing, Michigan
Coll / B, N / 1974-
$328,000 / Alfred P. Sloan Foundation / 50

The goal of this program is to reduce the prerequisite time needed for ethnic minority student to begin the engineering program. Self-paced instruction is available to the students in prerequisite technical courses.
George VanDusen, Assistant Dean, College of Engineering, Michigan State University, East Lansing, MI 48824

44 Pacific Southwest College Recruitment of Minorities and Women (Forestry, Natural Resources)
Berkeley, California
Coll / B, C, N / 1970-
$15,000 / PSW Forest and Range Experiment Station / 75

The goal of this program is to stimulate interest in forestry and natural

resource education among ethnic minorities and women students. After identification of interested students academic and career counseling were provided. During the summer, jobs were developed at this facility or at one of the seventeen National Forests in California. In a little over four years fifteen students have been assisted in gaining permanent employment with the Forest Service, United States Fish and Wildlife Services, and the California Division of Parks and Recreation.
B. Ernest Ford, P. O. box 245, Berkeley, CA 94621

45 Allied Health Exploratory Program (Health)
Mt. San Antonio College, Walnut, California
Coll (13-14) / B, C, N / 1974-
/ Mt. San Antonio College / 15

This program was designed to offer health sciences vocational training to educationally disadvantaged students in a community college. The goals of the program were retention of the students in school and his/her success in job placement. A skills development lab course in which students are given work specifically tailored to their needs, a hospital work experience (12 hour/week), and intensive work in Mathematics and English were features of the program. Subject matter from the science courses was used in the skills development course. Pre- and post-testing was done to measure the progress of the students. The rate of retention in school for the participants compares very favorably with the school as a whole. In addition, all students who completed both semesters had grade point averages of "C" or better.
Mrs. Margaret Foster, Chairman, Allied Health Department, Mt. San Antonio College, 1100 N. Grand, Walnut, CA 91789 (714) 598-2811

46 "Special Health Career Opportunity Grant" - Minority Retention in Allied Health Programs (Health)
El Centro College, Dallas, Texas
Coll (13, 14) / B, C, N / 1975-
$63,000 / HEW / 30

The participants of this program are minority students who have met requirements for admission into an Allied Health Program and who are experiencing difficulties in learning. Its purpose is to retain minority students in Allied Health Programs. The methodology proposed to be used are alternate learning methods: tutorial guidance, packages, mastery-based learning materials.
Mary G. Watts, El Centro College, Main and Lamar, Dallas, TX 75202 (214) 746-2369

47 Physics for Educationally Disadvantaged Students (Physics)
University of Colorado, Boulder, Colorado
Coll / B, C, N / 1971-
No Extra Cost / / 545 (1971-73

The course is open to all educationally disadvantaged students interested in taking it. The goals of this special course were to provide the basis for further work in the sciences and to encourage minority students to seek careers in science. The course is offered in the usual format for introductory courses (two one-hour lectures per week and one two-hour recitation per week). The special features of this class include the following: Interested faculty who volunteered to participate in the course; a major effort made to reduce the amount of calculational material; a major effort made to choose examples from the student's everyday experience. Lecture notes were provided to the students to allow them to concentrate on the material without the pressure of trying to write it down; a class council was formed which met with the lecturer weekly to discuss the progress of the course. The course has been a success based in part on the performance of the students and in part on the students' attitude towards the course. A large percentage of the students in the course indicated a desire to take further course work in physics. Most indicated that they would recommend the course to their friends. Part of the success has been due to the large amount of effort put in by the teaching staff and part to the fact that their desire to teach the course and belief in its ultimate success has been transmitted to the students, affecting their performance.
Allan Franklin, Assistant Professor, Franz Mohling, Professor, Department of Physics and Astrophysics, University of Colorado, Boulder, CO 80302

48 Summer Program for Minority Physics Students (Physics)
Fermi National Accelerator Laboratory, Batavia, Illinois
Coll, Grad (15-) / B, C, N / Summers 1971-
$80,000 / Fermi / 112

The goal of this summer program is to stimulate minority students to pursue professional careers in science. Scientific lecture series are given during the summer; job assignments of students are carefully matched to their needs, ability and interest; and mini courses are offered. Students write reports on their summer assignment and also give a short presentation. Students have done well on job assignments and related activities. Over the past programs, a number of students have continued in the science field, found jobs related to science, and entered into graduate school to further their education in science. The programs have been quite successful and improving considerably every year in giving the students more knowledge in the scientific disciplines.
Warren F. Cannon, Acting Manager, EEO and Community Relations, P. O. Box 500, Batavia, IL 60510 (312) 840-3415

49 Pre-Health Program (Biology, Chemistry, Mathematics, Health)
Tougaloo College, Tougaloo, Mississippi
Coll / B, N / 1971-1974
$600,000 / Josiah Macy, Jr. Foundation, OEO, United Negro College Fund / 400

The program of this historically Black college is designed to recruit, identify and prepare students for entry into health professional schools of medicine, dentistry, medical technology and other allied fields, with special emphasis on practice in Mississippi. The program consists of (1) a summer program for entering freshman college students with academic work in science, math and English; (2) preceptorships for undergraduates with hospitals, private physicians and health centers; (3) counseling for health professional schools and special colleges; (4) financial aid contributed by the college; and (5) test reviews. Science enrollments have doubled and the preparation of students seems to be improving. Between five and ten students per year have entered medical or dental school over the past several years. More are expected to enter starting in 1977.
Richard P. McGinnis, Tougaloo College, Tougaloo, MS 39174 (601) 956-8065

50 Third College (Natural and Applied Sciences, Pre-Medicine)
University of California, San Diego, La Jolla, California
Coll / B, C, N / 1969
/ University of California, NIH (MBS), Ford Foundation / 200

The University of California, through its regular institutional procedures and arrangements has sponsored and funded the efforts of Third College to increase minority enrollments in science majors as an integral and central component of the academic plan and objectives of Third College. The Ford Foundation and the National Institutes of Health-Biomedical Support Program have provided supplemental support. The goals of Third College are the education of large numbers of minority students. Special emphasis is placed on those disciplines in which minority underrepresentation is most severe, for example, the sciences, health professions and the more quantitative areas of the social sciences. In the sciences, the goals are to develop a lower division program in mathematics and natural science which would prepare minority students (and non-minority students) for academic competition with students from other colleges in upper division courses and admission to graduate and professional schools. Present methodology may be briefly described as follows: (1) recruit and admit minority students who are either regularly admissible to the University of California or who come reasonably close to meeting the admissions criteria; (2) measure the level of mathematics competency of all new Third College students by a mathematics placement examination. Design and offer a pre-calculus sequence from which students, depending on their individual mathematics skills, may take from one to three quarter courses before entering a campus-wide Calculus course; (3) offer chemistry and physics sequences of four quarter courses each, of which students may enter at either the first or second course levels of each sequence depanding on their level of mathematics and science preparation; (4) provide considerable faculty and staff monitoring and advising of students on an individualized basis. The project has accomplished the desired goals

only in part. In terms of the sciences, the goals are to produce substantial numbers of minority students who are competitive with other college graduates in their rates of admission and successful completion of medical and other graduate and professional school programs. The basic approach appears to be sound and effective. However, the numbers of minority students in the program are not large enough and the amount of support and resources available to the program is inadequate for achievement of the desired level of excellence and size.
Dr. Joseph W. Watson, Provost, The Third College Provost Office, University of California, La Jolla, CA 92093

51 Academic Foundations Department, Camden College of Arts and Sciences, Rutgers University (General Science)
311 North Fifth Street, Camden, New Jersey

Coll (13) /B, N, P / 1974-1975
$3,000 / NJ Dept. of Higher Education / 66

This summer program was intended to improve skills (especially of those pursuing nursing careers), to bridge gaps between high school and college, and to motivate students to pursue science fields. The participants were college fresmen (many in the Educational Opportunity Fund Program) who either had not had college preparatory science courses in high school or who wanted to improve their skills in order to pursue physical science courses in college. Structured class setting and small group study sessions were used to accomplish those goals. The number of students who are currently involved (voluntarily) in the continuing effort more than doubled.
Ruth F. Dixon, Room 401, Armitage Hall, Rutgers University, 311 North Fifth Street, Camden, NJ 08102

52 Minority Institutions (G) Science Improvement Program (MISIP)
(All Sciences)
College of Ganado, Ganado, Arizona
Coll (13, 14) / Mostly N, B, C / 1974-
$295,000 / NSF / 10

The stated goals of this program are to motivate more Indian youth to enter college and science careers and to provide better science education for Indian youth in this institution. The methodology used toward accomplishing these goals included establishing a science center in the college, hiring more instructors, developing more and better courses in sciences, math, social sciences, especially in the basic sciences, plus whatever locally needed, renovating science rooms, labs, and purchasing equipment and supplies.
Professor J. I. Jume and Dr. Joe Stickler, Division Chairman, College of Ganado, Ganado, AZ 86505 (602) 755-3442

53 Science Education Program (General Science, Health)
Washington State University, Pullman, Washington
Coll (15, 16) / B, C, N / 1974-
$230,000 / HEW, Corporations / 70

The goal of this program is to academically assist educationally, culturally, and economically disadvantaged students who are interested in science careers. There are two components - health care-related and general science. Each is designed to prepare the student for advanced study in a science discipline. The most important support service offered by SEP is the tutorial program. The tutorial staff is composed of junior, senior, and graduate students selected on the basis of interest and demonstrated ability to assist students in given sciences courses. A significant aspect of the program is providing summer placement for program students. Students are placed with agencies (corporations, clinics, hospitals, etc.) that reflect their indicated career choices; stipend monies significantly reduce the amount of money students will have to pay back upon graduation. Other supportive services are of a general university nature and concist of counseling, advising, and assisting students in securing financial aid.
Mack Johnson, D.V.M., Ph.D., College of Veterinary Medicine, Washington State University, Pullman, WA 99163 (509) 335-2608

54 Survival Skills Training Reinforced with Science Enrichment (Pre-Veterinary) School of Veterinary Medicine, Tuskegee Institute, Alabama
Coll (15, 16) / B, N, P / 1975-
$23,000 / HEW / 15

The objective of the program at this historically Black institution is to eliminate specific academic deficiencies of first-year students of veterinary medicine. Participants were selected from among pre-veterinary applicants -- "high risk" students predicted to become academic casualties. A redesigned experimental summer reading program conceived as a two-phase direct reinforcement program was implemented. The first phase is a 10-week summer pre-entry program designed to remediate fragmentation of science information, integrated with exercises in survival skills and problem solving techniques. The second phase is a continuation of certain reinforcement activities on a supportive basis throughout the first year.
Dr. Eugene W. Adams, Associate Dean, School of Veterinary Medicine, Tuskegee Institute, Tuskegee Institute, AL 36088 (205) 727-8176/8177

55 University of Southern California School of Dentistry Minorities Program, University of Southern California, Los Angeles, California
Coll (15-16) / B, C, N / 1970-present
/ Special Project Grant /

This program was developed to achieve greater representation in the Dental School and ultimately in the dental profession of students with minority backgrounds. The participants in this program are Chicano, Black or Native American students who have achieved at least two years of college work in the sciences.
Dr. John C. Vinton, Director of Student Life, University of Southern California School of Dentistry, 925 West 34th Street, Los Angeles, CA 90007

56 Dental Assisting and Dental Hygiene Programs
The University of New Mexico, Albuquerque, New Mexico

These programs started an active recruitment program with the University of New Mexico chapter of the National Chicano Health Organization in 1972. In addition, an NCHO representative served as an observer of Selection Committee procedures and a dentist chosen by NCHO became a voting member of that committee. There has always been encouragement of application from Chicano and Native American students (prominent minority groups of this area). No particular curriculum changes have been made for minorities but tutoring is arranged when needed through the all-University tutorial program.
Monica Novitski, Director, Dental Programs, The University of New Mexico, Albuquerque, NM 87131

57 Educational Opportunities Program
College of Dentistry, The University of Iowa, Iowa City, Iowa
Prof / B, C, N / 1970-1975
$35,000 per year / USPHS /

The goal of the program is to identify, recruit, admit and retain individuals of minority heritage who come from educationally and economically disadvantaged backgrounds. A special committee (whose membership is made up of students, faculty and administrators, and whose composition is more than 50% minority) has been set up to carefully examine and select minority applicants. To date, none of the students selected have been lost due to academic deficiencies.
Dr. Leslie H. Higa, College of Dentistry, The University of Iowa, Iowa City, IA 52242

58 Dynamics of Prejudice--Implications for Nursing (Nursing)
Division of Nursing-UCLA Extension, Los Angeles, California
Coll, Grad, Prof / B, C, N / 1968-1970
/ USPHS, NIMH / 100

Participants were recruited through schools of Nursing in the West and through health care agencies serving large numbers of clients from the three target minority groups. The overall objective of this program was to improve nursing practice. Specifically, the program sought to improve the curricula of Schools of Nursing related to the inclusion of content related to the three minority groups; to develop faculty awareness of the cultures of these minority groups, and to increase the numbers of faculty and students from the three minority groups. Individuals participated in two week-long, live-in workshops each year and interim projects at the nursing schools sending participants as well as those from service agencies. There was evidence of increased awareness that influences the individual nurses' ability to give safe care to patients from the three minority groups. As a result of this effort, several other projects were initiated that had national and regional impact. Two were sponsored by the Western Interstate Commission for Higher Education in Nursing--"Faculty Development to Meet Minority Group Needs in Nursing--Recruitment Retention and Curriculum Development." (completed); and "Models for Introduring Cultural Diversity in Nursing Curricula" (In Progress) (for Information, Contact: Ms. Marie Branch, MN Project Director, P. O. Drawer P,

Boulder, CO 80302 (303) 492-7696. Other "spin-offs" were: organization of the Chicano Nurse Association, the Native American Nurses Association, Nurses for Action, the California Nurses Association Task Force on Affirmative Action, and the ANA Task Force on Affirmative Action; and preparation of a textbook, "Providing Safe Nursing Care to Ethnic People of Color" Appleton Press, Marie Branch and Phyllis Paxton, Editors, 1976--a cooperative effort by 15 nurses from Black, Latino, Asian and Native American cultures. Dr. Gladys D. Jacques, University of California, University Extension. Department of Continuing Education in Health Sciences, 10995 LeConte Avenue, Los Angeles, California 90024

59 Minority Career Recruitment (Veterinary Medicine)
University of Illinois, Urbana-Champaign Campus, Urbana, Illinois
Prif / B, N / 1971-1973
Nominal / None

The goal of this graduate level program was to recruit minorities, principally Blacks, into the student body of this college and to graduate them with the D.V.M. degree. Emphasis was on recruitment to the veterinary curriculum and career by personal contacts by the Dean of the College, a Black faculty member and a Black practitioner in the community colleges and in high school career programs in the Chicago area and in southern Illinois areas. Efforts were made to attract Blacks refused entrance to the Medical School at the University of Illinois. The program was judged by staff to be a total failure since not even interest was shown by students in high schools or colleges.
L. Meyer Jones, University of Illinois, Urbana, IL 61801 (217) 344-3550

60 ESEA TITLE I Programs (Science, Technology)
Museum of Science and Industry in Chicago, Chicago, Illinois
Elem / All / 1965-1970
/ ESEA Title I, Educational Opportunity Act / 200,000

Dr. Victor J. Danilov, Director, Museum of Science and Industry, 57th Street and Lake Shore Drive, Chicago, IL 60637, (312) 684-1414

61 LESSON (Lawrence Livermore Laboratory Elementary School Science Study of Nature) (Science)
Lawrence Livermore Laboratory, University of California, Livermore, California
Elem (4-6) / All / 1972-
/ Lawrence Livermore Laboratory / 55 scientists, 450 students (1972-1973)
Manuel Perry, Equal Opportunity Administrator, Lawrence Livermore Laboratory, Livermore, CA 94550

62 LESSON Workshop (Science)
Lawrence Livermore Lab , Livermore, California
Elem / All / 1974-1975
/ LLL /
Manuel Perry, Equal Opportunity Administrator, Lawrence Livermore Laboratory, Livermore, CA 94550

63 "Science Playhouse" Series (Science, Technology)

Museum of Science and Industry in Chicago, Illinois
Elem, Sec / All / November 1972-May 1973
$37,000 / NSF 29,000
Dr. Victor J. Danilóv, Director, Museum of Science and Industry, 57th Street and Lake Shore Drive, Chicago, IL 60637 (312) 684-1414

64 Plainfield Science Education Center (Science)
Plainfield, New Jersey
Elem, Sec / All / 1971-
/ State Department of Education, Rutgers, Bell Labs, other industry /

65 Round Meadow Outdoor Laboratory School (Environmental)
Catoctin Mountain Park, Thurmont, Maryland
Elem / All / 1973-
$1,200,000 / U. S. Office of Education ESAA / 14,800

66 Committee to Increase Minority Professionals in Engineering, Architecture and Technology, (CIMPEAT) (Architecture, Engineering, Technology)
100 Peachtree Street, Suite 1712, Atlanta, Georgia
Sec, Coll, Prof / All / 1973-
$50,000 (1975) / Various / 24,000
Ms. Jackie Means, Executive Director, P. O. Box 1097, or 100 Peachtree St., Suite 1712, Atlanta, GA 30303 (404) 688-7500

67 ASCE - Notre Dame - Pre Engineering Summer Program for Minority Students (Civil Engineering)
Sec (11, 12) / All Summer 1976
/ Part $10,000 / ASCE, Notre Dame / 50
Carl E. Nelson, ASCE Manager of Field Services, 354 E. 47th Street, New York, New York 10017

68 Catalyst in Indianapolis (Chemistry)
Indianapolis, Indiana
Sec (11) / All / 1972-
/Various / 10 (1975)
Edwin Harper, Ph. D., Indiana Section, ACS

69 ACS Project Catalyst (Chemistry)
Local projects ongoing on various campuses throughout the United States
Sec / All / 1969-
$378,000 (student support) / American Chemical Society / over 750
Naomi Lev, Staff Associate, American Chemical Society.

70 Minority and Low Income Engineering-Potential Students-Summer Program (Computer Science)
Wichita State University, Wichita, Kansas
Sec / All / Summer 1971
/ College of Engineering, WSU / 15

71 Pre-Engineering Summer Institute (Engineering)
Olive-Harvey College, Chicago, Illinois
Sec (10-12) / All / Summer 1975
/ NSF /
Mr. George Hansberry, Olive-Harvey College, 10001 So. Woodlawn Avenue, Chicago, Illinois 60628

72 Science and Industry Program (Engineering and Science)
Newark, New Jersey
Sec / All / 1973-
/ Bell Labs /

73 Minority Engineering Programs (Juniors) (Engineering)
Illinois Institute of Technology, Chicago, Illinois
Sec (11) / All /
/ 84 in Saturday Program, 57 in six week summer program

74 Minority Engineering Programs (Seniors)(Engineering)
Illinois Institute of Technology, Chicago, Illinois
Sec (12) / All /
/ 29 in Pre Co-Op Program (5 in 1974)
Nate Thomas, Minority Coordinator of Cooperative Education, Illinois Institute of Technology, Chicago, IL 60616

75 Minority Engineering Opportunity Program (MEOP) (Engineering)
University of Maryland - College Park Campus, College Park, Maryland
Sec, Coll (11-13) / All /
$15,000 / University of Maryland, Westinghouse Foundation / 20
Dr. William Wockenfuss and Dr. Andrew Goodrich, c/o College of Engineering, University of Maryland, College Park, MD 20742 (301) 454-2421

76 Gateway to Engineering, Science and Technology (Engineering, Mathematics) College of Engineering and Applied Science, University of Wisconsin, Milwaukee, Wisconsin

77 Engineering Career Interest Workshop (Engineering)
Ohio State University, Columbus, Ohio
Sec (7-12) / All / 1976-
$22,725 / CIC + MPME, OSU / 600

78 Committee on Institutional Cooperation Midwest Program for Minorities in Engineering (CIC + MPME) (Engineering)
14 Midwestern engineering institutions
Sec / All / 1975-
Part $75,000 Matching Funds / Alfred P. Sloan Foundation and institutions
William Thomas, Executive Director, CIC + MPME, Administrative Services Building, Purdue University, West Lafayette, IN 47907 (317) 749-6302 and 749-6419

79 PRIME Philadelphia Regional Introduction for Minorities to Engineering (formerly called PIMEG) (Engineering)
Philadelphia, Pennsylvania
Elem, Sec, Coll / All / 1973-
$90,000 per year / Private, NSF, G. E. Foundation, Sloan Foundation, Other / 550+
W. Barry McLaughlin, Executive Director, PRIME, FIRL-Room 107, 20th and Race Streets, Philadelphia, PA 19103

80 Mayo Program for Special Health Career Opportunities (Health Sciences) Mayo Medical School, Rochester, Minnesota
Sec, Post-Sec, Coll, Grad, Prof / All / 1972-
$75,000 / Mayo Foundation /

Dr. John Thompson, Coordinator, Department of Microbiology, Mayo Medical School, Rochester, MN 55901

81 Nuclear Engineering Education for the Disadvantaged (Nuclear Science, Engineering)
American Nuclear Society (ANS)
Sec, Coll / All / 1972-
$2,000 / American Nuclear Society / 20
Dr. George A. Ferguson, School of Engineering, Howard University, Washington, D. C. 20059 (202) 636-6605

82 A Project to Increase Minority Optometric Manpower (Optometry)
National Progrm of National Optometric Association
Sec, Coll, Grad / All / 1972-
$280,000 / Natl. Optometric Assoc.
Dr. Charles Comer, Project Director, NOA Minority Recruitment, 3736 Main Street, Box F, East Chicago, IN (219) 398-1077

83 MEDPREP (Medical Education Preparatory Program) Outreach Tutorial Project (Pre-Dentistry, Pre-Medicine)
Southern Illinois University at Carbondale, Illinois
Sec, Coll (13-14) / All / 1974-
$50,800 / Special Health Career Opportunity Grant - HEW /
Dr. Mary Pohlmann, Instructor MEDPREP, Wheeler Hall, Room 102, Southern Illinois University, School of Medicine, Carbondale, IL 62901

84 Medical Education Reinforcement and Enrichment Program (MEDPREP) (Pre-medicine, Medicine)
Tulane Medical Center, New Orleans, Louisiana
Sec, Coll, Prof / All /
Over $600,000 / Various, including R. W. Johnson Foundation /
Dr. A. Cherrie Epps, Professor of Medicine, Director, MEDPREP, Tulane Medical Center, 1430 Tulane Avenue, New Orleans, LA 70112

85 MUSE (Motivating Urban Science Education) (General Science)
In three Junior High Schools-- Berkeley, California
Sec (7-9) / All / 1970-1971
/ 70 /
Rita W. Peterson, Assistant Prof. of Education, Department of Teacher Education, California State University, Hayward, CA 94542

86 Summer Science School (Science and Technology)
9 Bell Labs Locations in 1975: Holmdel, Murray Hill, Raritan River and Whippany, New Jersey; Allentown, Pennsylvania; Columbus, Ohio; Guilford Center, North Carolina; Indian Hill, Illinois; Merrimack Valley, Massachusetts
Sec (9) / All / Summers 1970-
/ Bell Laboratories / 250

87 Minorities and Science Careers: Counselor Training and Career Guidance Films (Science counseling)
Los Angeles County Schools, Downey, California
Sec (10) / All / 1974-1975
/ NSF /
Ms. Golden A. Harris, Division of Compensatory and Intergroup Programs,

Office of Los Angeles County Superintendent of Schools, 9300 East Imperial Highway, Downey, CA 90242

88 Associate's Degree Scholarship Program (Technical Fields) Bell Labs
Sec, Coll (13, 14) / All / 1971-
/ Bell Labs / 130-150

89 Joint Urban Manpower Program (JUMP) (Technical)
New York, New York; San Francisco, California; St. Louis, Missouri
Sec / All / 1969-
/ Participating organizations, firms, city, Federal /
Veronica M. Anthony, c/o Vocational Foundation, 44 East 23rd Street, New York, New York 10010 (212) 777-0700

90 Health Professions Special Project Grant Program (Veterinary Medicine)
School of Veterinary Medicine, Tuskegee Institute, Alabama
Sec, Coll (8-16) / All / 1972-
/ Part $295,000 / HEW / 7
Dr. Walter Bowie, Dean, and Dr. Ellis Hall, School of Veterinary Medicine, Tuskegee Institute, Tuskegee Institute, AL 36088 (205) 727-8465

91 American Society of Biological Chemists Lecturer-Recruitment Program (Biological Sciences)
Coll (15, 16) / All / 1971-
$35,000 / ASBC, Josiah Macy Foundation / 300
Dr. Harold Amos, Department of Microbiology, Harvard Medical School, 25 Shattuck Street, Boston, MA 02115 (617) 734-3300, x 685

92 Biology Course for Educational Opportunity Program Students' (Biology) Office of Biology Education, University of Washington, Seattle, Washington
Coll / All / 1972-
/ UW /
Dr. Leonie K. Piternick, Office of Biology Education AF-60
University of Washington, Seattle, WA 98195

93 Minority Biomedical Support Program (Biology, Chemistry)
New Mexico State University, Las Cruces, New Mexico
Coll, Grad / All / 1974-
/ MSB Program / 26 students, 9 faculty
Dr. Glenn Kuehn, Associate Professor of Chemistry, New Mexico State University, Las Cruces, NM 88003

94 Black Executive Exchange Program (Computer Science)
University of Arkansas--Pine Bluff, Arkansas
Coll / All / 1976-
/ National Urban League / 100
Dr. Lawrence Davis, Department of Mathematics and Physics, University of Arkansas--Pine Bluff, AR 71601 (501) 535-6700

95 Minority - Engineering Program (MEP) (Computer Science, Engineering)
California State University, Northridge, California
Coll / All / 1973-

$45,000 / School of Engineering, Private Industry / 119
Dr. Raymond B. Landis, School of Engineering, California State University, Northridge, CA 91324

96 Syracuse University Program for Minorities in Engineering (Engineering)
College of Engineering, Syracuse University, Syracuse, New York
Coll / All / 1976
$25,000 + / General Electric, Syracuse Univ /
Bradley J. Strait, ECE Dept., 113 Link Hall, Syracuse, New York 13210 (315) 423-2652

97 Civil, Electrical, and Mechanical Engineering and Computer Service (Engineering, Computer Science)
Federal City College, Washington, D. C.
Coll / All /
$260,000 / Federal City College / 250
Dr. Tony T. S. Yang, 929 E. Street, N. W., Washington, D. C. 20004 (202) 727-2741

98 Cornell Program (Engineering)
Bell Labs
Coll / All / 1972-
/ Bell Labs / 40

99 Basic Educational Program (Engineering Technology)
Columbus location of Bell Labs
Coll / (13, 14) / All / 1970-
/ Bell Laboratories /

100 Plans for Progress (Engineering and Sciences)
Bell Laboratories
Sec, Coll / All / 1962-
/ Bell Laboratories /

101 SCoRMBE (Engineering)
University of Kansas, Lawrence, Kansas
Coll / All / 1971-
$176,000 / Various / 173
Dr. W. E. Hogan II, Associate Dean of Engineering, University of Kansas, Lawrence, KS 66045 (913) 864-3541

102 Special Freshman Engineering Program/Special Freshman Orientation Program
Princeton University, Princeton, New Jersey
Coll (13) / All / Summers 1969-
$110,000 / State of New Jersey, Princeton / 287
Professor Seymour Bogdonoff, D214 Engineering Quad., Princeton, NJ 08540 (609) 452-5125

103 Environmental Seminar (Environmental)
Central YMCA Community College, Chicago, Illinois
Coll (13, 14) / All / 1970-
$72,000 / Central YMCA Comm Coll / 250
Ms. Helen Kossoff, Central YMCA Community College, 211 West Wacker Drive, Chicago, IL 60606 (312) 222-8334

104 Harvard Health Careers Summer Program (Health Science)
Harvard University Summer School, Cambridge, Massachusetts
Coll / All / 1972-
\$350,000 / Harvard University Health Career Opportunities, Robert Wood Johnson / 800
Thomas Crooks and William Wallace, Harvard University Summer School, Cambridge, Massachusetts 02138

105 North Carolina Health (E) Manpower Development Program (Health)
Elizabeth City, North Carolina
Sec, Coll / All / Summers 1974, 1975
\$10,000 / Kate B. Reynolds Health Care Trust / 34
Mr. Walter R. Winborne, Elizabeth City State University, Elizabeth City, NC 27909

106 Minority Counseling and Recruitment for Allied Health: Philadelphia Center for Health Careers (Health Education and Counseling), Philadelphia, Pennsylvania
Elementary, Sec, Coll / All / 1968-
\$80,000 per year / City, Federal, State Institutions / 6,000 per year at present
William E. Blewett, Ph.D., Executive Director, and Dr. Frank Husted, President, Center for Health Careers, 311 South Juniper St., Philadelphia, PA 19107

107 Cleveland Health Education Museum (Health Education)
8911 Euclid Avenue, Cleveland, Ohio
All / All / 1968-
/ Various / 50,000
Lowell F. Bernard, Director, Cleveland Health Education Museum, 8911 Euclid Avenue, Cleveland, OH 44106

108 Health Career Opportunity Program (HCOP) (Health Sciences)
Rust College, Holly Springs, Mississippi
Coll / All / 1973-
\$110,000 / NIH / 125
Mr. Paul Lampley, Acting Director, HCOP, Rust College, Holly Springs, MS 38635 (601) 252-4661, x 259, x 268

109 Health Career Opportunity Program (Health Sciences)
Ohio State University, Columbus, Ohio
Coll (13-14) / All / 1975-
\$61,000 (1975-1976) / NIH, Ohio State University / 32 (1975-1976)
Mr. Patrick Kennicott, Assistant Director for Development, Ohio State University Research Foundation, 1314 Kinnear Road, Columbus, OH
Ms. Dora E. Hall-Mitchem, Director of Program Development, Research and Evaluation, Office of Minority Affairs, Ohio State University, 349 Administration Building, 190 North Oval Mall, Columbus, OH 43210

110 Opportunities in Health for Minorities (Health--general)
University of Minnesota, Minneapolis, Minnesota
Sec, Coll, Grad, Prof / All / 1972-1975
\$557,000 / PHS, Office of Health Resources Development, Special Health Careers Opportunity Grant, University of Minnesota / 548
H. Geoffrey Fisher, 1-168 Frontier Hall, University of Minnesota, Minneapolis, MN 55455

111 Learning Environments and Ethnic Minority Achievement (Nursing)
San Jose State University, San Jose, California
Coll (14-16) / All / 1975-
$78,000 / HEW / 2-0
Fay L. Bower, Principal Investigator, Department of Nursing, San Jose State University, San Jose, California 95192 (408) 277-1950

112 Study Related to Admission, Counseling, Program Planning and Instruction of Minority Students Who Have Indicated An Interest In Nursing (Nursing)
School of Nursing, Michigan State University, East Lansing, Michigan
Coll / All / 1972-
$319,000 / Public Health Service / 223

113 Health Professions Project Grant for Pharmacy Students (Pharmacy)
Temple University School of Pharmacy, Philadelphia, Pennsylvania
Coll / All / 1972-1975
/ Part $200,000 / HEW / 61
Fred B. Gable, Assistant Dean and Registrar, Temple University School of Pharmacy, Philadelphia, PA 19140 (215) 221-4900

114 Howard University Cooperative Physics (Physics)
University of Arkansas--Pine Bluff, Pine Bluff, Arkansas (and other institutions)
Coll / All / 1975-
$40,000 / HEW / 2
Dr. Lawrence Davis, Dept. of Mathematics and Physics, University of Arkansas--Pine Bluff, Pine Bluff, AR 71601 (501) 535-6700

115 Porter Physiology Development Program (Physiology)
American Physiological Society
Coll / All /
/ Harvard Apparatus Co. /

116 Medical Education Preparatory Program (Pre-Dental, Pre-Medical)
School of Medicine, Southern Illinois University, Carbondale, Illinois
Coll, Grad / All / 1972-
$671,000 / School of Medicine, HEW / 100
Michael L. Rainey, Director, MEDPREP, Wheeler Hall, Southern Illinois University, Carbondale, Illinois 62901 (618) 536-6671

117 Post Baccalaureate Pre-Medical Programs for Minority Students (Premedicine) Connecticut College, New London, Connecticut
Coll (Post-Baccalaureate) / All / 1971-
$4,500 per student (Annual) / Various Foundations /
Dr. Jewel Plummer Cobb, Dean and Professor of Biology, Douglass College, Rutgers--The State University of New Jersey, New Brunswick, NJ 08903

118 Student Support Program (Summer Bridge Program) (Science)
California Institute of Technology, Pasadena, California
Coll (13) / All /
$10,000 per year / Calif. Inst. of Tech. /
Lee F. Browne, Director, Secondary School Relations, California Institute of Technology, Pasadena, CA 91125

119 Science and Technology (Chemistry, Physics, Mathematics)
State University of New York, College at Old Westbury, New York
Coll (13) / All / 1971-
No extra cost / / 250
Dr. Samuel von Winbush, 223 Store Hill Road, Old Westbury, NY 11568 (516) 876-3127

120 Summer Research Programs for Minorities and Women (Science and Engineering)
Bell Labs, Murray Hill, New Jersey
Coll (15, 16) / All / 1974-
/ Bell Labs / 124
Ms. Eleanor Wilson, Technical Employment Department, Bell Laboratories, 600 Mountain Avenue, Murray Hill, NJ 07974

121 Summer Institutes, Lawrence Livermore Laboratory (Engineering)
Lawrence Livermore Laboratory, Livermore, California
Coll / All / 1970-
/LLL under contract to ERDA / faculty from 43 colleges
Personnel Department, Lawrence Livermore Laboratory, Livermore, CA 94550

122 Recruitment of Disadvantaged Students (Veterinary Medicine)
University of California, Davis, California
Coll, Prof / All / 1969-
Timothy R. O'Brien, Associate Dean--Student Services, University of California, Davis, Davis, CA 95616

123 Student Recruitment for Minorities and Disadvantaged (Veterinary Medicine) Iowa State University, Ames, Iowa
Coll, Prof / All / 1970-
/ Iowa State /
P. T. Pearson, Dean, College of Veterinary Medicine, Iowa State University, Ames, IA 50010 (515) 294-1250

124 Educational Opportunities Program (Pre-Veterinary Medicine)
Kansas State University, Manhattan, Kansas
Coll / All / 1972-
$80,000 / Kansas State University / 45

125 Minority Recruitment for Veterinary Medicine (Veterinary Medicine)
College of Veterinary Medicine, University of Minnesota, St. Paul, Minnesota
Sec, Coll, Grad / All / 1974-
$10,000 / College of Veterinary Medicine / Approx 5
W. L. Andberg Klohs, Administrative Assistant, (Coordinator of Minority Recruitment), 301 Veterinary Science Building, University of Minnesota, St. Paul, MN 55108 (612) 376-3892

126 Graduate Student Recruitment (Chemistry)
University of Illinois, Urbana, Illinois
Grad / All / / University of Illinois, Urbana / 7

Galen Stucky, Department of Chemistry, 263 Noyes Laboratory, University of Illinois, Urbana, IL 61801 (217) 333-0889

127 Career Growth Program (Chemistry and Material Science)
Lawrence Livermore Laboratory, Livermore, California
Grad / All / 1975-
/ LLL /
The Career Growth Program, R. Reidburn, Personnel Dept., L-352, Lawrence Livermore Lab oratory, P. O. Box 808, Livermore, CA 94550

128 Joint Program to Increase the Pool of Chicago Area Minority Secondary School Students Motivated Toward and Capable of Entering Engineering Colleges (Engineering Counseling)
University of Illinois-Chicago Circle (Chicago, Illinois), Illinois Institute of Technology, (Chicago, Illinois), Northwestern University (Evanston, Illinois)
Grad (Tch Ed) / All / 1976-
$38,000 / Sloan Foundation /
Dr. Richard Michaels, Head, Urban Systems Laboratory, College of Engineering, UICC, Box 4348, Chicago, IL 60680 (312) 996-4820

129 Cooperative Research Fellowship Program (Physics, Chemistry, Math, Engineering and Computer Science)
Bell Labs, Murray Hill, New Jersey
Grad / All / 1972-
/ Bell Labs / 18

130 Racial Justice Program (Psychology)
Department of Psychology, University of Pittsburgh, Pittsburgh, Pennsylvania
Grad / All / 1968-
$40,000 / University of Pittsburgh / 50
Dr. David C. Wood, Department of Psychology, University of Pittsburgh, Pittsburgh, PA 15260 (412) 624-5045

131 098 Graduate Recruitment Program fo r Minority Students (Psychology)
Department of Psychology, University of Nebraska--Lincoln, Nebraska
Grad / All / 1971-
$2,000 / University of Nebraska / 18
Frank J. Dudek, Adviser to Minority Graduate Students, Department of Psychology, University of Nebraska, Lincoln, NE 68508

132 Recruitment of Disadvantaged Students into Dentistry
School of Dentistry, University of Oregon Health Sciences Center, Portland, Oregon
Elem, Sec, Coll, Prof / All / 1972-
/ State of Oregon, State Board of HIgher Education, HEW /
C. K. Claycomb, Ph.D., Deputy Director, Minority Recruitment, Professor and Chairman, Department of Biochemistry, School of Dentistry, University of Oregon Health Sciences Center, Portland, Oregon 97201

133 Students for Dentistry Program (SDP)
New Jersey Dental School, Newark, New Jersey
Coll, Prof / All / ongoing
/ Special Project Grant PHS /

Mr. Allison G. Dildy, Director, SDP, New Jersey Dental School, College of Medicine and Dentistry of New Jersey, 201 Cornelison Avenue, Jersey City, NJ 07304

134 Summer Trainee Enrichment Program (S. T. E. P .)
School of Dentistry, UCLA, Los Angeles, California
Coll (15-16) / All / Summers 1970-1973
/UCLA School of Dentistry, Vice Chancellor of Academic Affairs Office/ 60
Drs. J. Freed, J. Houston, K. Trabert and E. Hanson, School of Dentistry University of California, The Center for the Health Services, Los Angeles, CA 90024

135 School of Dentistry, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina

Special effort is made in recruiting minority students through the help of the North Carolina Health Manpower Council and individuals at minority institutions in North Carolina.
Dean Raymond P. White, Jr., School of Dentistry, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27514

136 College of Dentistry, The University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma
William E. Brown, D.D.S., Dean, College of Dentistry, The University of Oklahoma Health Sciences Center, P. O. Box 26901, 1110 Northeast 12th St., Oklahoma City, OK 73190

137 Summer Program, J. Hillis Miller Health Center, University of Florida (Dentistry and other Health Sciences)
University of Florida, Gainesville, Florida
Prof / All / ongoing
/ Office of Minority Relations /
Mr. Willie J. Sanders, Director, Office of Minority Relations, Box 731, J. Hillis Miller Health Center, University of Florida, Gainesville, FL 32610

138 Students for Dentistry Program (Pre-Dentistry, Dentistry)
New Jersey Dental School, Newark, New Jersey
Coll, Prof / All / 1973-
Mr. Allison G. Dildy, New Jersey Dental School, Room B-824, 100 Bergen St., Newark, NJ 07103

139 Recruitment, Admission and Retention Program of Minority and/or Disadvantaged Students in the Field of Dental Health
School of Dentistry, University of California, San Francisco, California
Elem, Sec, Coll, Prof / All / 1968-
/NIH, HEW, UCSF /
Robert F. Brigante, D.D.S., Assistant Dean and Project Director, Recruitment, Admission and Retention Program of Minority and/or Disadvantaged Students in the Field of Dental Health, School of Dentistry, University of California, San Francisco, 1466 4th Avenue, #108, San Francisco, CA 94143

140 Basic Science Enrichment Program (Basic Medical Sciences)
University of New Mexico School of Medicine, Albuquerque,
Prof / All / 1972
$337,000 / / 85
Antonio Gomez, Office of Student Affairs, University of New Mexico School of Medicine, Albuquerque, NM 87131. (505) 277-2728

141 Program to Increase Opportunities in Medical Education for Disadvantaged Citizens (Medicine)
School of Medicine, University of California, Davis, California
Prof / All / 1970-
$11,000 / School of Medicine /
George H. Lowrey, M. E., Associate Dean, Office of Student Affairs, School of Medicine, University of California, Davis, CA 95616 (916) 752-3170

142 Recruitment, Admissions, and Retention Program (Medicine)
Temple University Health Sciences Center, Philadelphia, Pennsylvania
Prof / All / 1971-
$455,000 / / 361
Mr. Charles S. Ireland, Jr., Assistant to the Dean, Director of RAR Program, School of Medicine, Temple University Health Sciences Center, Philadelphia, PA 19140 (215) 221-3595

143 Technology - People - Environment (Technology)
College of Engineering and Applied Sciences, SUNY Stony Brook, New York
Prof (Tch Ed) / All / 1970-
/ Exxon, AT & T, NSF / 1500

Native Americans Project Finds Some Barriers Breaking Down

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